

UNITED STATES DEPARTMENT OF THE INTERIOR -
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT -
GULF OF MEXICO REGION -

ACCIDENT INVESTIGATION REPORT

For Public Release

1. OCCURRED

DATE: **18-JAN-2015** TIME: **2140** HOURS

2. OPERATOR: **BHP Billiton Petroleum (GOM) Inc.**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: **Transocean Offshore -**

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER **Dropped Object**

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR
ON SITE AT TIME OF INCIDENT:

6. OPERATION:

4. LEASE: **G16765**

AREA: **GC** LATITUDE:

BLOCK: **610** LONGITUDE: -

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER

5. PLATFORM:

RIG NAME: **T.O. DEEPWATER INVICTUS**

6. ACTIVITY:

- EXPLORATION (POE)
- DEVELOPMENT/PRODUCTION (DOCD/POD)

8. CAUSE:

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE - SLIP/TRIP/FALL
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER _____

7. TYPE:

- HISTORIC INJURY -
 - REQUIRED EVACUATION
 - LTA (1-3 days)
 - LTA (>3 days)
 - RW/JT (1-3 days)
 - RW/JT (>3 days)
 - Other Injury -

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

- LWC -
- HISTORIC BLOWOUT
 - UNDERGROUND
 - SURFACE
 - DEVERTER
 - SURFACE EQUIPMENT FAILURE OR PROCEDURES

9. WATER DEPTH: **4275** FT.

10. DISTANCE FROM SHORE: **112** MI.

11. WIND DIRECTION: **NNE -**
SPEED: **12** M.P.H.

12. CURRENT DIRECTION: **SW**
SPEED: **2** M.P.H.

13. SEA STATE: **4** FT.

COLLISION HISTORIC >\$25K <=\$25K

On January 18, 2015, the PS-1000 drill pipe slips set unexpectedly while drilling ahead. The Driller had just made a connection and was rotating at 180 RPM (Revolutions per Minute). As the drill string was lowered, the pipe slips set unexpectedly, bringing the pipe to a sudden stop. The immense torque created from the immediate halt of the drill string was transferred to the MDDM (Modular Derrick Drilling Machine), causing the bolts on two of the I-BOP's actuator plates to be sheared. The I-BOP is a safety valve, located on the top drive of the rig, which can be closed should the rig experience a well control event. One of the plates fell approximately 30 feet to the bridge-racker walkway, and the other fell approximately 130 feet to the rig floor. Each of the actuator plate's approximate dimensions are 10" x 7.5" x 1.5" with a weight of 19 pounds. No personnel were located in either of these areas and no one was injured during the incident.

Just prior to the incident, the Assistant Driller noticed that the drill string was rubbing against the rotary and slips. He called up to the Bridge of the ship to ask the crew if they could reposition the rig so as to straighten up the drill string passing through the rotary. The Bridge explained that they were unable to reposition due to the poor weather conditions at the time. The drill crew continued on with operations, and moments later, the slips closed unexpectedly on the rotating drill pipe. The unintentional setting was due to the excessive amount of downward force that was being applied to the top of the pipe slips from the drill string. Once the downward force of the drill string overcame the force of the hydraulic pressure that was keeping the slips in the open position, the slips closed, the drill string came to an abrupt halt, and ultimately the bolts were sheared off of the actuator plates on the MDDM.

The probable cause of this incident was a combination of both weather conditions and equipment failure. The rig was unable to reposition the ship to a more favorable drilling position due to weather, and the PS-1000 slips set due to the downward pressure of the drill string. BHP and Transocean are looking into installing a bushing saver and guide that should prevent any future occurrences.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

- Poor weather conditions prevented the crew from repositioning the rig to a more favorable drilling position. -
- The downward force created by the drill string rubbing against the slips overcame the hydraulic pressure that was holding the slips in their open position.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

N/A

20. LIST THE ADDITIONAL INFORMATION:

Note: The I-BOP's actuator plate bolts were sheared again on January 25, 2015, which spurred another investigation. This investigation discovered that the MHWirth/Aker I-BOP actuator plates and lever arms were making contact during drilling operations and that modifications to the equipment needed to be made to prevent a future occurrence. For more details on this incident and the modifications that were made, see the

investigation report for 25-Jan-2015. -

21. PROPERTY DAMAGED:

N/A

NATURE OF DAMAGE:

N/A

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

BSEE Houma District has no recommendations to make to the Region at this time.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

N/A

25. DATE OF ONSITE INVESTIGATION:

11-FEB-2015

26. ONSITE TEAM MEMBERS:

James Richard / Josh Ladner /

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

APPROVED

DATE: **30-MAR-2015**